

Robotic Process Automation Increases Data Quality

Introduction

Data is at the heart of almost every modern enterprise. Information drives sales, enables customer insight and generates growth through repeat business. It is also an essential component of good customer service, with few organisations managing to offer a differentiated service without good data quality.

The Blue Prism virtual workforce enables stronger oversight, protection, and improvement of data quality within an organisation. The Blue Prism virtual workers perform data quality activities with a depth of granularity that would be inconceivable for their human equivalents. Use of centrally stored, re-useable processes, allows consistent data quality rules to be applied to any business process as the Blue Prism robots fulfil operational process execution. Furthermore Blue Prism is unlike many traditional automation tools because, rather than being deployed to user's desktops, it is deployed to the data-center and therefore processes large backlogs in an efficient manner, under the governance of IT, whilst also providing full visibility of every action and decision taken.

This data sheet describes how the Blue Prism virtual workforce can enabled stronger oversight, protection and improvement of data quality within an organisation.

Causes of poor data quality

To understand the role that Robotic Process Automation can play in improving data quality, it is helpful to understand some of the root causes of poor quality data. Though numerous, these reasons often include:

- Simple human error.
- Inadequate training and/or poor process adherence by users, particularly where organisations have to respond in an agile manner to seasonal business patterns, and where the use of temporary staff is commonplace.
- The existence of multiple systems with potentially overlapping data and a lack of referential integrity between records across the systems.
- Business processes containing many manual steps, often within outdated or unintuitive systems designed for a different set of requirements, thus introducing numerous opportunities for human error.
- System workarounds and reuse of data fields intended for another purpose (such as a notes field being used for mobile phone numbers), often with poor data definition and formatting - and with limited consistency and adherence by users

- Infrequently used data and lack of opportunity to maintain or update it.
- Inappropriate incentivisation or performance measurements of staff activity, leading to rushed or poor quality work.
- Equally, the lack of incentivisation of operational staff to improve data quality problems, even where the problems are immediately apparent and the opportunity is present.
- Incomplete levels of integration between systems.

Data quality through a Robotic Process Automation lens

Preventing data problems through validation

Robotic Automation can help to reduce the incidence of bad data by identifying and intercepting poor data quality at source, before it enters business systems. The validation features, described in more detail below, allow for a multitude of mechanisms, including:

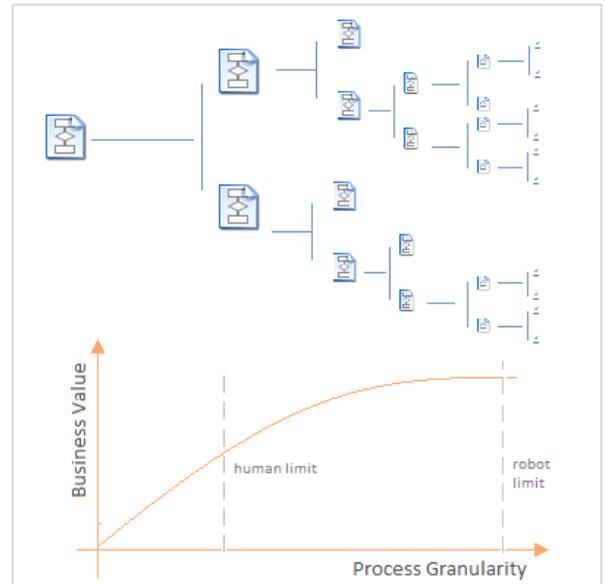
- Rules based validation of input data, checking input formats, data lengths, data types etc.
- Transformation of data into the correct format – e.g. translation of dates from European format dd/MM/yyyy to US format MM/dd/yyyy.
- Verifying the presence (or absence) of data
- Verifying low level attributes – e.g. length, character set, data checksums (e.g. MD5), etc.
- Complex pattern matching and transformation according to definitions expressible using wildcards and regular expressions.

From a workflow and operational standpoint, software robots allow operational teams to leverage the Pareto principle: robots can clear the bulk of the workload whilst identifying and referring data exceptions to human teams. This elevates the role of the operational agents from performing mundane repetitive tasks onto higher value activities with greater job satisfaction and increased returns for the employer.

Accuracy, compliance & granularity

On the theme of error prevention, robots make exemplary back office agents, performing their work in an error free manner and with 100% compliance and consistency against business requirements within the documented business process. Outcomes are right first time, with no steps omitted and no checks neglected. Irrespective of the complexity or duration of the task, robots retain concentration and work precisely to the documented business process.

The tireless nature of robots, and the fact that they do not tire of boredom, means that processes can be enhanced or redesigned to take advantage of this “temperament”. Checks of a much more repetitive and granular level can be made to arbitrary degrees of precision. Reconciliation, checking and record matching can be executed beyond what a human can be reasonably expected to do.

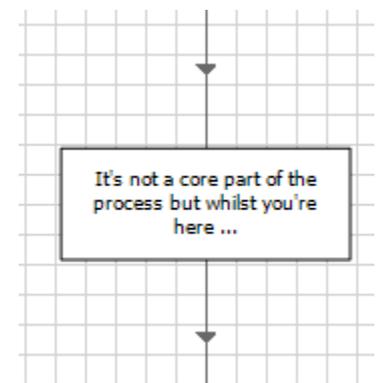


A fresh approach to business process design

Capitalising on incidental opportunities

During day to day operations a back office agent may identify a problem with some data on an incidental basis, (i.e. whilst performing another task on the same account or record). The nature of the problem could be anything from a piece of missing data to an information discrepancy between systems. In some cases the agent may take the opportunity to correct the problem on the spot or to alert another team member but, frequently, that agent may be incentivised by - or monitored against – a particular performance metric which creates a disincentive against spending any time in this way. Equally, laziness can create a barrier to intervention where the remediation is lengthy.

A robot, on the other hand, can be configured to take intervention in such cases. This intervention may take a number of forms. For example, it may consist of creating an alert (e.g. by email or through a workflow task) to an appropriate user where the problem is likely to require human judgement. Equally, if it would be too time-consuming or too low a priority to address on the spot, the robot could add the account to its own queue for later remediation during a quiet period.



The new economics of a robotic workforce

Dedicated processes to audit and cleanse data which would traditionally be impractical, become economically viable due to the lower price point of a virtual workforce.

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In some cases the robotic processes might be self-directed, either systematically seeking to identify problems by inspecting accounts one by one or through the use of sampling. Many organisations find that they already have the tools to identify data quality problems through the use of existing reporting and analytical capabilities; however the problem has historically been the absence of a viable and cost effective solution to remedy the issue.

Systematically working through a report containing account numbers is an ideal task for a robot, something which it can perform out of hours and during quiet periods. Such processes enable organisations to leverage additional productivity from their robotic workforce, beyond the business as usual requirement for which they were first deployed.

Enabling cross functional business processes

Where multiple systems of record exist across multiple functional areas it may be that there are segregated business processes to address the same task in the different systems or, indeed, it may be that the process is not replicated at all in the different areas. One hypothetical example might be where a customer holds multiple products in the financial services industry under the same brand. The customer may call the provider to provide notification of a change of address and, quite reasonably, end the call believing that the provider will have immediate knowledge of all of their product holdings and update them all accordingly.

In the event, what may happen is that the call operator merely updates the one product that is visible to him/her with the expectation and onus being on the customer to repeat the exercise by ringing the relevant departments which serve the different products.

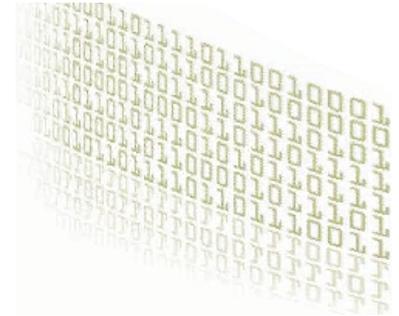
The use of a robotic workforce can make it easier for a call agent to key the information once, into a digital enabler such as a webform, and delegate the task of updating the address across multiple systems and products to a robot. This robot will be able to accurately and systematically make the change, even where the different products and data records sit in distinct functional areas or in logically disjointed IT environments.

Channel enablement

Reducing barriers to participation from customers in maintaining their data is often a big driver towards improving data quality. This often involves making the data visible to customers via new channels, such as mobile apps, the web, SMS, etc., and also providing them with a means to submit any required changes.

Given that traditional IT approaches often require many months or years of analysis and significant investment – sometimes for a marginal or unproven business case – a short term robotic approach to implementing such an interface (that is, through the use of a virtual workforce to rekey the data once captured via the front end channel) can provide significant strategic advantage in terms of:

- reducing time to market;
- validating an uncertain business case;
- refining requirements ahead of a more strategic implementation via an IT solution;
- bringing forward the business benefit associated with the investment.



Robotic Process Automation as an accelerator for technological change

Further Information

More information can be found at www.blueprism.com. If you would like to speak to someone from Blue Prism or our partner network please phone 0870 879300 (UK) or 1 888 7577 476 (US) or email info@blueprism.com